

Receiver Sampling in an Ultra-Wideband Communications System

ABSTRACT OF THE DISCLOSURE

System and method for minimizing receiver sample timing error sensitivity. A preferred embodiment comprises matching received pulses to two pulses, a first pulse being advanced by a time offset and a second pulse being retarded by a time offset. Samples are created from the matching. The time offsets can be chosen based upon characteristics of the pulse itself. The samples can be combined to produce an output signal with less pronounced nulls that can reduce sensitivity to sample timing errors and a smoother overall profile that can enable gradient-based timing recovery scheme.